

REPORT ON PHASE I, AUGUST 1 TO SEPTEMBER 19, 1983,
OF THE GEOLOGICAL AND EXPLORATION PROGRAM
ON THE FENWAY RESOURCES LIMITED PROPERTY OPTIONED
FROM THE OWNERS J. KENNELLY AND E. FROST

Frost Claims - Prospector's Dream,
Old ABE, Ben D'Or
Ken 1 to 8

Kennelly Claims - Weaver 1,3,5
Weaver 2,4,7 and 8

There are the equivalent of 121 units being explored.

Located in Fort Steele Mining Division in the East Kootenay in south-eastern B.C.

Ref. Maps - Grassy Mountain 82F8, Moyie Lake 82G5

Lat. - $49^{\circ}25'N$ Long. - $116^{\circ}04'W$

Elevation - 4600 feet to 7860 feet

Fenway Resources Limited and Calgary Exploration Partners provided money to have the work done. W. Inverarity is the manager for this group.

Gerald Mason is the consultant geologist.

Kennelly Contracting Ltd. did the physical work on the roads and trenches.

Report submitted December 15, 1983.

REPORT ON THE GEOLOGICAL AND EXPLORATION
PROGRAM ON THE FENWAY RESOURCES LIMITED PROPERTY
PHASE I AUGUST 1 TO SEPTEMBER 19, 1983

CONTENTS

Introduction.....	Page	1
Method.....		4
Assessment Breakdown.....		5
Results - Physical Work.....		6
Results - Geological.....		7
Conclusion.....		12
Recommendations.....		13
G. Mason - Geological Experience.....		14

APPENDIX

Affidavit of Disbursements - Rella Docking Mamen
& Company

MAP (In Pocket)

Fenway Resources 1 inch = 20,000 inches

INTRODUCTION

The objective of the geological and exploration program was to find gold/silver ore in place on the Fenway Resources Ltd. property and to evaluate the structural possibility of testing the ground for extension of the Sullivan lead/zinc ore zone.

The claims optioned from Ed Frost are Prospector's Dream, Old ABE, Ben D'Or, Ken 1,2,3,4,5,6,7,8 and the claims optioned from J. Kennelly - Weaver 1,2,3,4,5,7 and 8.

The Weaver M.C. and the Prospector's Dream are located in one of the more attractive geological areas for prospecting in south-eastern British Columbia. There is no reason why it is not possible to find either gold ore bodies or extensions of the Sullivan ore zone. This area has not previously been extensively prospected or examined in detail because of inaccessibility due to fallen timber as a result of widespread forest fires in 1930-35. Recent clear-cut logging roads in the 1970-1975 period have opened up extensive areas for detailed prospecting and geological examination.

These claims are located on a ridge trending north-easterly 12 miles by 5 miles in size between the Moyie River and Perry Creek. The claims cover an area of 11 square miles. Placer gold has been recovered in both the Moyie River and Perry Creek. The rest of the area

is covered by claims owned by Cominco Ltd. or by Falconbridge Ltd.

Money was provided to Fenway Resources by the Calgary Partners to do exploration in three phases. i.e. I, II, III. The plan provided \$30,000 for Phase I. If the Phase I was successful, then additional funds would be provided. This report describes work done in Phase I between August 1 and September 15, 1983.

Geologically the area studied is underlain by Pre-Cambrian sedimentary rocks either of the Creston Formation or the Aldridge Formation and gabbro sills. Cominco and Falconbridge have been interested in this area looking for extensions of the Sullivan ore zone at the base of the Aldridge Formation. In May 1982 Cominco staked another block (NOKE) of claims looking for the bed-rock source of the placer gold.

The Perry Creek and Moyie River have both been the source of placer gold off and on since 1864. Significant amounts of placer gold have been recovered in 1980, 81-82 by Moyie Placer Limited using heavy machinery. They have recovered in excess of \$1,000,000 (2,000 ounces) in gold in an excavation of gravel 40 feet deep. Their workings are located on Moyie River about two miles above its junction with Weaver Creek. The value of the gold bearing gravel is about \$100,000 for every 100 foot length

of channel.

The Prospector's Dream is a quartz fissure vein located in gabbro and Aldridge sediments. It was located and crown granted in 1899. Short adits and winzes have been driven in flat-lying veins in gabbro. The veins consist of rusty gossan with visible gold and assays as high as 3.0 ounces Au/ton.

METHOD

The roads and adjoining ground were examined and prospected in the clear-cut logged areas. Prospecting crew Al August and Al Singer, and Gerald Mason, geologist, spent August and September at this work.

Kennelly's Contracting Ltd. made new access roads and trenched along shear zones, quartz veins and old winzes driven before 1900. Equipment used was J.D. Backhoe - \$55/hour, D7G Cat - \$88/hour, supply truck - \$40/day.

Two pick-up trucks were used from Cranbrook and Kimberley daily. The claims are located 20 miles west of Cranbrook and 40 miles from Kimberley.

ASSESSMENT BREAKDOWN

Truck Mileage Allowance (G. Mason) - \$ 550.44 (July,
Expenses (G. Mason) - \$ 280.56 Aug.,Sept.)

Personnel

G. Mason, Consulting Geologist - \$5,000.00
25 days @ \$200/day
July 5,14,15
August 8,9,10,11,13,15,16,20
22,24,26,29,30,31
Sept. 1,2,5,6,7,8,9,10

Al August, Prospector - \$1,445.87
14 days / holiday pay @ \$100/day
August 8 to September 1 as above
dates for G. Mason

Al Singer, Prospector - \$1,187.97
10 days / holiday pay @ \$100/day
August 15 to Sept. 1 as above
dates for G. Mason

W. Inverarity, Manager
Supervision \$2,000.00
Expenses 1,652.24 - \$3,652.54

\$12,117.38

Some of the expenses for assays, maps and air photos have not been included.

RESULTS - PHYSICAL WORK

In access of 20,000 feet (6,000 meters) of new roads were built.

On the Prospector's Dream at least eight separate trenches or old winzes to depth of 20 feet were opened up.

On the Weaver No. 2 M.C. three trenches for total length of 300 feet and depth of 4 feet were excavated. Three areas contained low-grade gold-bearing shears or quartz veins.

In five areas the backhoe excavated under large blocks of quartz. These were found to be float or to be detached from bedrock by glacial creep or solifluction. These blocks were underlain by 15 feet of angular blocks of sediments or gabbro or else by saprolitic weathered bedrock.

The cost of the physical work - \$13,262.97.

RESULTS - GEOLOGICAL

The area under study extends from elevation 4150 feet at Moyie River to elevation 7860 feet at the peak of Old Baldy Mountain and then down to elevation 4650 feet in Perry Creek. Many parts of the study area show the effects of the Miocene deep weathering (saprolite - rotten rock) to vertical depths of 100 to 200' below the original bedrock surface. This is interpreted from adjoining areas to have occurred between 25,000,000 to 2,000,000 years ago. This was prior to the Glacial Period which extended from 2,000,000 to 10,000 years ago. The ice movement during the Glacial Period was responsible for partially moving some of these residual weathered soils and accumulated placer gold deposits out towards the major valleys. i.e. Rocky Mountain Trench.

Mountain cirque glaciers have plucked out and stripped all the loose bedrock, quartz veins from the crest or the north-easterly trending ridge for at least one half mile on either side of the highest peaks. It is in this area where quartz/pyrite mineralized veins are exposed. Below this naturally stripped area the glaciers have usually covered the bedrock with a thick mantle of the Miocene saprolitic soil and angular fragments of bedrock by solifluction. (i.e. Glacial creep on permafrost during the Glacial Age.)

There are at least two major north-easterly trending faults. One is the Perry Creek Fault located along the valley of Perry Creek and the other is the Baldy Fault (or the Gold Shear) located along the crest of the ridge and just west of Old Baldy Mountain. The attitude of the Baldy Fault (Gold Shear) is St. 22° Dip Vertical.

The bulk of the exposed outcrops is middle to upper Aldridge Formation in the Weaver Creek drainage, the attitude of the bedding is St. 35° Dip 15° S.E. Within one half mile of the crest of the ridge the Creston rocks outcrop and the attitude is St. 35° Dip $45-60^{\circ}$ N.W. Diorite or gabbro sills outcrop at many places in the middle Aldridge. Varve type laminations in the middle Aldridge were identified in three localities and were identified by Cominco geologists as the "Sundown". Large concretions 6-9" with alteration to biotite, garnet, albite (adinole? related to gabbro) were found at three locations in the middle Aldridge. These are also a stratigraphic marker beds.

A narrow acid dyke was observed north of the Prospector's Dream vein. Epidote veinlets 3-6" wide are abundant in gabbro sills. In contrast these veinlets are not prevalent in the Sullivan Mine area. This tentatively indicates the source of the quartz/pyrite veins is supplied

by an underlying Mesozoic or Tertiary quartz/diorite intrusion. The nearest outcrop of this type occurs 7 miles west at the head of Hell Roaring Creek.

Black manganese oxide stains are frequently observed near the gold-bearing quartz/pyrite veins.

The claims on the Galway Creek drainage were not examined this year, so the Baldy Fault was not observed. However, a branch of the Baldy Fault was observed at the head (elevation 6,000) of east branch of Weaver Creek. This suggests the change of attitude of Creston Formation is related to the faulting and associated quartz/pyrite veins.

This initial study has shown that there are at least three separate gold mineralized shears which appear to be subsidiary or complementary to the Baldy Mountain Fault.

A. Weaver No. 2 M.C. Shear

The "Weaver No. 2 M.C. Shear" occurs on the south-west side of the cirque basin at the head of Weaver Creek at elevation 6000. The attitude of this shear is St. 85° Dip N.E. 80° . This shear is located in the upper Aldridge Formation and less than 500 stratigraphic feet below the Creston Formation contact. The Aldridge is made up of soft incompetent argillite. This shear extends for a strike length of 800 feet. This shear was

stripped to a depth of 4 feet at three locations. The westerly end was stripped for 50 feet, then 200 feet east was another trench 170' long was made, and then 300 feet eastward another trench 50' long was made.

The trenches were sampled in 10-foot sections. The better values occurred in the central trench and were as follows:

	<u>Oz. Au/ton</u>	<u>Oz. Ag/ton</u>
40' - 50'	0.036	0.03
70' - 80'	0.022	0.02
80' - 90'	0.012	0.02
90' - 100'	0.042	0.02
100' - 110'	0.020	0.03
110' - 120'	0.018	0.02
120' - 130'	0.006	0.02
130' - 140'	0.020	0.06
140' - 150'	0.040	0.02

A shear with similar attitude was observed in the canyon of Weaver Creek 3.3 miles to the east along the placer working. This was the ground worked by G. Weaver prior to 1870.

B. Galena Vein

The "Galena Vein" is exposed in a trench alongside a road at elevation 6000 feet. The vein is also located in the upper Aldridge Formation. The vein appears to be parallel to the bedding. The attitude of the vein and sediments is St. 50° Dip Vertical. The vein occurs adjacent to a block of gabbro or perhaps a diabase dike (Mesozoric in age).

The best values are as follows:

	<u>Oz. Au/ton</u>	<u>Oz. Ag/ton</u>
3'	0.079	0.32
1'	0.410	1.15

This vein may extend along a stratigraphic horizon in the Aldridge Formation intermittently to locality A. Subsequent exploration in October, Phase II, and November, Phase III, confirmed this idea.

C. Prospector's Dream

The original vein was a lenticular quartz vein 4' thinning abruptly to 2 feet occurring at the base of a gabbro sill. The attitude of the vein is St. 30° Dip N.W. 15°. The gabbro is decomposed to soft saprolite (rotted rock). Free gold can be observed in limonitic gossan in the quartz veins.

The indicated length of the vein is 1800' and width 36". The vein can be observed in the sediments underlying the Purcell diorite or gabbro sill. The attitude of the sediments is St. 170° Dip 35°. When the vein is in the sediments the dip changes from 15° to 65°.

The values obtained from:

	<u>Oz. Au/ton</u>	<u>Oz. Ag/ton</u>
Adit	3.6	2.94
Winzes	0.165	0.09
	0.173	0.06
	0.171	0.54
	0.114	0.73

CONCLUSION

Three separate areas of gold-bearing quartz have been found on the Fenway Resources Ltd. claims. It appears that nearly all quartz veins tested carry low grade gold values. Whether these veins will prove to be of commercial grade and size will depend on additional sampling, strip-ping, surveying and geological mapping. This exploration program has located some of the bedrock sources of the placer gold in Moyie River. Phase I of the exploration program was completed and work should continue on Phase II \$30,000 and Phase III \$40,000.

RECOMMENDATIONS

- A. Continue searching for gold along extension of Weaver No. 2 Shear. An access road along south side of Weaver Creek was proposed. This was to be soil sampled and to be tested with magnetometer (for gabbro).
- B. Examine the associated Baldy Shear at the head of Weaver Creek. This is the boundary between steeply-dipping Creston Formation and flat-dipping upper Aldridge Formation.

Gerald Mason - Geological Experience

1935 - 1941 Field Assistant on Geological Survey of Canada
1940 B.A. in Geology, U.B.C.
1941 - 1944 Cominco - Mine Geologist, Pinchi Lake Mercury Mine
1945 - 1946 Cominco - Exploration Northern B.C.
1947 - 1964 Cominco - Sullivan Mine Geology
1964 Cominco - Deep drilling Pinchi Lake Mercury
1965 - 1976 Cominco - Sullivan research exploration
November 1976 Retired Cominco
1977 Consulting Geology - Texas Gulf
1978 Consulting Geology
- Nelson Price - gold - Sawmill Creek
- A. Miller - Hat - barite
- Imperial Oil - Frost's claim - McNeil Creek
- BBX - barite claims reports to Baroid and Mountain Minerals
1979 Consulting Geology
- International Marble & Stone Ltd. - magnesite
- Doug Roller - Wardner - limestone
1980 Consulting Geology
- Bonn Energy - Frost's claim - McNeil Creek
- G M Resources - Copper Soo Mine (Estella),
Fort Steele
- Motherlode and Greyhound,
Grand Forks
- Airborne Geophysical Surveys
- BBX - barite
1981 Consulting Geology
- Airborne Geophysical Surveys
- BBX - barite
- Teaching Prospecting and Geology
- Night School, East Kootenay
Community College
- Barwell Resources Ltd.
- Dynamic Drilling Fluids
- Pedley - barite
1982 Consulting Geology
- Barwell Resources Ltd.
- Dynamic Drilling Fluids
- Pedley - barite
- Elkhorn - barite

- 1982 (Cont'd) - B.C. Dept. of Mines - Prospecting for source of placer Au in East Kootenay
- 1983 Consulting Geology
 - West Can Mine Fund - Pedley - barite
 - B.C. Dept. of Mines - S.E. B.C. & Northern B.C. Prospecting Cont'd
 - Fenway Resources Ltd. - Kennelly-Frost option

Gerald Mason.

Gerald Mason

APPENDIX

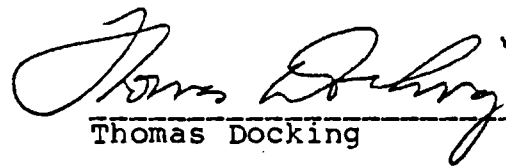
FENWAY RESOURCES LTD.

PHASE I DISBURSEMENTS

A. Singer	Wages	560.00		Paid Aug. 30, 1983
	Wages	505.57		Paid Sept. 16, 1983
	Holiday Pay	53.40		Paid Nov. 18, 1983
A. August	Wages	1100.00		Paid Aug. 30, 1983
	Wages	274.35		Paid Sept. 16, 1983
	Holiday Pay	71.52		Paid Nov. 18, 1983
Deductions remitted to Receiver General		<u>830.54</u>	3395.38	Paid Sept. 16, 1983
G. Mason			5839.00	Paid Sept. 16, 1983
W. Inverarity Supervision Expenses		2000.00 1652.54	3652.54	Paid Sept. 16, 1983 Paid Sept. 16, 1983
			<u>12886.92</u>	

These cheques were issued by our offices up to September 19, 1983.

Rella Docking Mamen & Company


Thomas Docking